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# IN SEARCH OF ACADEMIC SUCCESS INDICATORS: AN ANALYSIS FROM THE STUDENTS' PERCEPTIONS ABOUT QUALITY OF EDUCATION

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**Abstract.** Characterizing the quality of education may encompass the analysis of several variables, such as human resources, financial resources, teaching methodologies, good academic results, personal and social development. Nevertheless, all elements of the education system matter and may contribute to improve its quality. Ultimately, the success of an education system depends on the interaction of all elements. In order to study the representations of quality, a longitudinal research project is taking place in some higher education institutions of Alentejo (Portugal).

In this paper the authors analyse the relationship between scores on quality education representations of students in the University of Évora and Polytechnic Institutes of Beja and Portalegre.

**1 QUALITY OF EDUCATION IN PERSPECTIVE.** The concept of "quality" applied to education in general and to education in particular, has been for some time a global concern, which has become a matter of educational debate since 1940, when opportunities arose for the expansion of population's schooling [Hobsbawm (1), Garcia (2)]. Due to its multidimensional nature, it is a concept that doesn't have a consensual definition [Araújo & Oliveira (3), Avasilcai, Boier & Hutu (4), Amante (5)].

According to a report on quality of education in Portugal, made in 1984, there was found a great difficulty in defining this concept, since, on one hand, this results from its "global character, because the concept includes both the results and factors that condition it more directly" and, on the other hand, stems from "their relativity, because it implies the objectives of the system as a point of reference" of "its complexity, because it covers the results of qualitative and quantitative order" and, finally, of "its regulations, since it implies a comparison between what is and what should be" [OECD (6)].

The concept of quality of education is thus not only associated to the quantitative aspects of an education system, having as reference the number of pupils and teachers, the number of schools and budget size, but also the qualitative aspects of that system, regarding the adequacy of programs, the assessment process, the degree of participation, the capacity of innovation, interaction with the surrounding community and the sharing of resources, climate and the level of satisfaction of the various stakeholders in the process [Bateman & Roberts (7), Faulkner (8), Bonvillian & Nowlin (9), Hosbsbawn (1), Bailey & Benett (10), Rinehart (11), Sherkenbach (12), Chua (13), Oliveira & Araújo (3), Amante (5)].

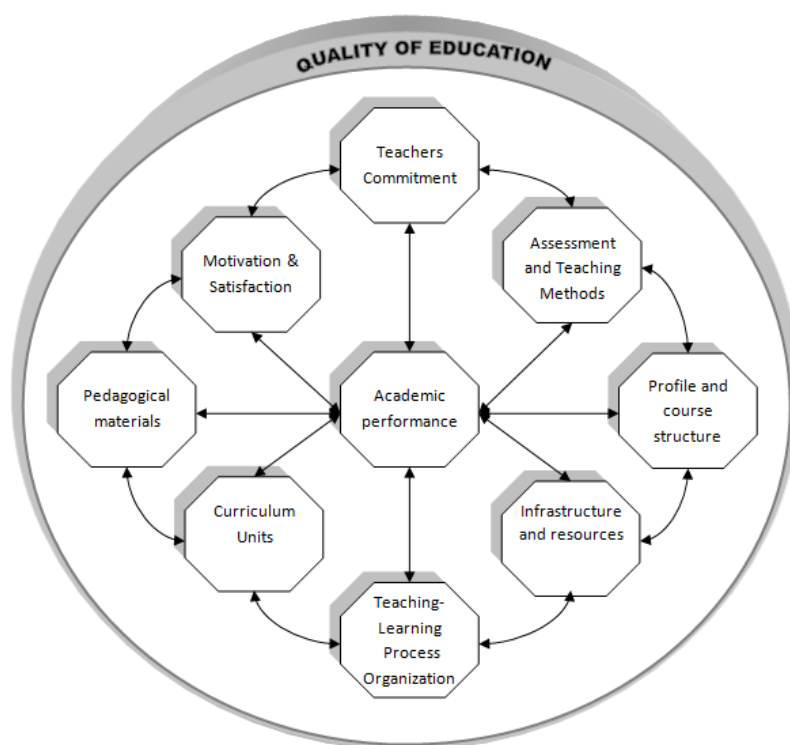
Moreover, this concept is also linked to the effectiveness and efficiency and relates to the need for expansion of education to more young people to increase success rates, to the adequacy of the teaching and learning process, including curriculum, training of teachers, the upgrading of schools and the strengthening of young people skills, because an effective teaching is characterized by the demand for quality at all levels [Chappell (14), Papadopoulos (15), Salmon (16), SCUP (17), Cloutier & Richards (18), Buch & Shehutt (19)].

Thus, the effective and quality schools are highly related to the concept of the development of students which is measured by its cognitive, academic and not academic results, like the positive expectations, the attitudes towards schooling and learning, sociability and ability to work in group, the spirit of initiative, the ability to make decisions and the acquisition of values related to the spirit of citizenship, freedom and respect for difference [Venâncio & Otero (20)].

For Ethier (21), the concept of quality in education focuses primarily on three parameters: quality of human, financial and material resources that should have a department of education, quality of the educational process in which programs and methods express all potential and quality of academic performance, but also the related personal and social development of students. Other authors [eg, Deming (22), OECD (23), Rinehart (11), Hobsbawn (1), & Oliveira Araújo (3), Correia (24)], in their analysis of the quality of schools or educational systems, address mainly the quality of resources or focus primarily on the quality of the process and its results. However, both factors interpenetrate and is from the optimal combination that appears the add value for the quality of schools. To Saraiva (25), all the approaches related to organizational characteristics of schools generally tend to be formed around the following three major areas: the physical structure (size, number of classes, management of space, material resources), the administrative structure (management, decision-making, teaching and non teaching staff) and the social structure (inter-relations, internal democracy, the school culture, climate).

A perspective, not unlike those which have been outlined so far, is presented by the global study and reflection carried out by the OECD (26). This study reflects the concern with the need to improve the quality of teaching and focuses on five priority areas that believes in finding the quality of schools and school systems [OECD (26): 177].

The concept of quality in higher education can also be seen, according to Harvey [cited by Amante (5)] in terms of excellence, as something special, which aims to achieve perfect results. But the educational system is, as shown in Figure 1, a function of several variables and, above all, the interaction between these factors [Ethier (21), OECD (26), Papadopoulos (15), Hosbsbawn (1), Leonard (27), Rinehart (11), Venâncio & Otero (20), Chua (13), Saraiva (25), Oliveira & Araújo (3), Amante (5)].



Source: Authors' elaboration

**Figure 1.** Variation sources of the educational process

The systems approach not only introduces a new vocabulary in school, as it is obliged to review requiring many of its practices, given that the "system" is a central element of any philosophy of quality and has enormous potential in the explanation of the main problems that occur in the educational context [Helminski Kobern & (28), Cloutier & Richards (18), Chappell (14)].

One way to develop systemic thinking is to consider how the fundamental processes of an organization interact. In school, many cases are: budgeting, recruitment, hiring, assessment, among many others. Naturally, there is a tendency for each to focus on process in which is directly involved, but the truth is that the change that is tried on a particular aspect, even though making sense for the process in question, can not work or have the desired effect in the system as a whole [Buch & Shelnutt (19), Helminski & Kobern (28), Leonard (27), Pati, Kings & Bettona (29)].

For Leonard (27), Bonvillian & Nowlin (9), Engelkemeyer (30) and Wilson (31), the lack of awareness of education as a system, entails that each individual case is not examined in their relations with others. Taking a systemic perspective for education means recognizing its different components and to focus on how they interact to form a whole. Improving a process is to manage all elements and not each one individually.

Essentially, the quality has equal opportunities underlined, the need to modernize the educational facilities, the distribution of resources, educational guidance, training programs for staff education, students assessment, the tutoring and the education relationships with the models of economic development and labor market. Thus, the concept of quality is perceived differently, according to the role and function it develops, which makes it difficult for communication between different actors in education. For some, quality of education identifies itself with the concept of curriculum quality and for others, with the discipline climate, order and success, among other views [OECD (26), Bailey & Bennett (10), Chua (13), Morais, Almeida & Montenegro (32), Amante (5) Web (24)].

Given these reasons, a broader research project has been drawn up with the aim of verifying how the representation of students on quality of education evolves in the transition-cycle studies, in particular, the transition from primary to secondary education and for higher education. The identification and measurement of variables is considered in this study, for students of higher education, seeking to identify the representations of the quality of students involved, particularly in what relates to their academic success.

## 2 METHODOLOGY

**2.1 Participants.** 270 students from three institutions of higher education in the Alentejo region (Portugal) participated, with 198 students aged between 18 and 52 years, with an average of 24 years of age. The students belonged to undergraduate courses in management and in nursing and had entered the 1st grade in the 2008/2009 academic year, distributed according to Table 1. The choice of courses, due to the fact of being common to the three institutions under review: University of Évora, the Polytechnic Institute of Beja and the Polytechnic Institute of Portalegre.

Table 1. *Sample distribution by course*

| Education Institution | F   | %     |
|-----------------------|-----|-------|
| Nursing               | 149 | 55,2  |
| Management            | 121 | 44,8  |
| N =                   | 270 | 100,0 |

Regarding academic success, 182 of the subjects had not failed any curricular unit, but for 77 of them this had happened in a curricular unit (37.8%), two curricular units (25.7%), three (16.2%), four (9.5%) or more curricular units. However, the vast majority (70.8%) had failed only once, especially because they were students enrolled in the 1st grade of the course.

**2.2 Procedures.** To examine the representations of students against the quality of education it has been implemented a structured questionnaire, constructed for this purpose, based on literature review, considering the study of OECD (23) and studies of Deming (33), Ethier (21), Bateman & Roberts (7), Tribus (34), Turner (35), Chua (13), Saraiva (25), Amante(5) and Correia (24), among others. The result were different dimensions of quality in analysis, such as motivation, the commitment of teachers of the course, the teaching materials, the methods of teaching, the assessment methods, the programs of curricular units, the organization of the teaching and learning, adequacy of infrastructure and resources of the Institution of Higher Education, the adequacy of the profile and structure of the course, the degree of satisfaction and academic success.

The questionnaire consists of 73 items, with a range of response formed by five points (*Lickert* modified type), with the options of answer: completely disagree, disagree, agree, agree completely, I do not know/Not applicable/ I am undecided), seeking to know the representations of the quality of students against the school to which they are subjected to. The instrument also includes some social demography issues, as well as some questions of free answer on the understanding of educational quality, the aspects to improve the institution of education, how to improve school results, the number and reasons given for flunking and the curricular units more and less preferred.

The final version was obtained by consensus among members of the research project, and then subjected to a panel of outside experts, who gave information that would clarify the language and improve the construction of items. Data collection occurred between the months of May and June 2008 and the questionnaire was applied directly by the team of researchers in the classroom, having obtained the necessary authorizations for it.

The 73 items of the questionnaire were treated with the software SPSS (version 16.0), by using descriptive and inferential analysis, allowed established associations with some significance between variables, selecting those who had a degree of confidence higher than 95% . To calculate the average there were used the following weighting coefficients: 1 - completely disagree, 2 - disagree, 3 - Agree, 4 - I agree completely, the expected average score is 2.5. The answers "Do not know / Not applicable / I am undecided" were coded with 98 and the non-responses and/void as system missing (99). Furthermore, it was used the analysis of variance, with the aim of identifying the representations of students about quality in education and there was used the method of the Regression Trees (CART algorithm).

**3 RESULTS AND DISCUSSION.** To meet the objective of the study, it was investigated the relationship between the different variables related to the representations of quality of education outlined by the students and their level of satisfaction with the course they are in.

This analysis resulted in the association that are presented in Table 2 and Figure 2, which allow us to understand the importance of which of the variables studied when combined with the degree of students' satisfaction.

Table 2. *Relationship between the variables of the questionnaire and the degree of satisfaction with the progress of the course that students are attending*

| Items  | Importance | Normalized Importance % |
|--|------------|-------------------------|
| Adequacy of the profile and structure of the course                                  | 0,144      | 100                     |
| Teaching methods   | 0,097      | 67,1                    |
| Curricular units' program  | 0,077      | 53,6                    |
| Adequacy of the infrastructures and resources of the Institution of Higher education | 0,071      | 48,9                    |
| Assessment methods   | 0,063      | 43,5                    |
| Commitment of teachers of the course   | 0,053      | 37,0                    |
| Pedagogical materials  | 0,041      | 28,3                    |
| Motivation   | 0,033      | 23,2                    |
| Organization of the teaching and learning process                                    | 0,028      | 19,6                    |

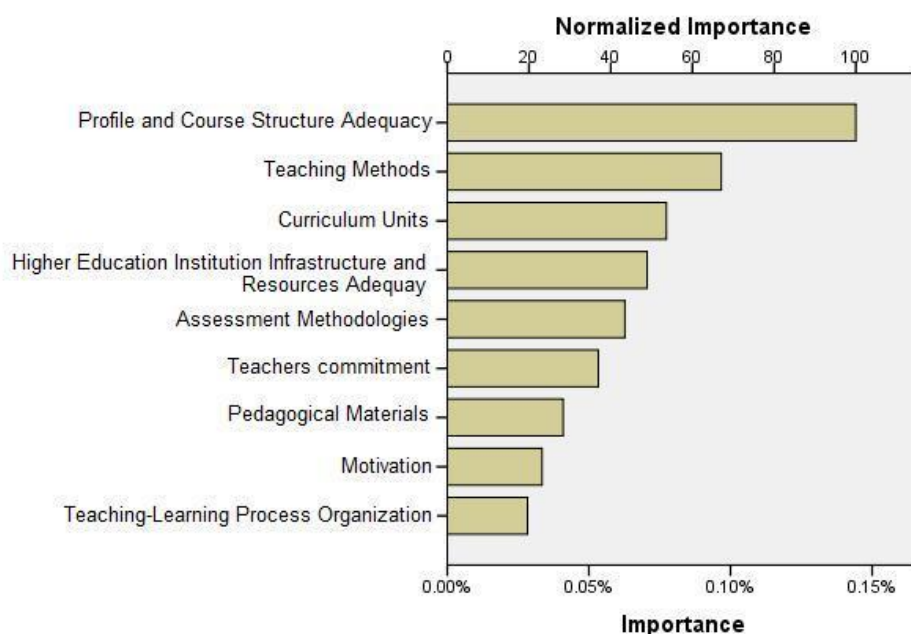


Figure 2. *Relationship between the variables of the questionnaire and the degree of satisfaction with the progress of the course that students are attending*

The variables of major importance in determining the perceive of quality by the students questioned in the study were the *Consistency of the Profile and structure of the course, the teaching methods and the program of curricular units*, explanatory, each of at least half of the sample under analysis. The items included in the *Adequacy of the Profile size and structure of the course* dimension, relate mainly to the quality of the curriculum, the link between the objectives and content of the course and the labor market and the professional profile of the licensee. So we can see the importance in the construction of their concept of quality, which gives students questioned the relationship between the degree that they are attending and the professional world. The items relating to variable methodologies of teaching relate primarily to the scientific and pedagogical quality of teachers and the quality and recovery includes the participation of students in classes, the adequacy and balance between theory and practice, among other things. One should highlight the competence of the teacher is, thus, a leading role in the assessment of students. Noting, finally, the size of the Curricular Units Program, which includes items such as the connection between the themes and objectives with the skills required, the correlation between the content of the program and actually taught and its adaptation to the required learning, we can see how the quality and success of programs can also influence the representations of quality education.

It is important to note that the variable degree of satisfaction regarding the course includes 3 items and the results obtained in the questionnaire in terms of average correlation, which were are present in Table 3.

Table 3. *Responses from students for the Degree of Satisfaction*

| Items   | Mean | Standard Deviation |
|---|------|--------------------|
| The course satisfies me totally                               | 3,07 | 0,627              |
| The higher education institution satisfies me                 | 2,96 | 0,648              |
| The academic success that I have reached satisfies me totally | 2,58 | 0,763              |

As can be seen, the students inquired were satisfied with the course they are in and also, although to a lesser extent, with the higher education institution. The satisfaction with their income is the item that reaches the lower average in this variable.

When the intersection between the items regarding the degree of satisfaction is made, isolated, and one of the indicators of academic success - the existence of failures in units of the course curriculum - were associated with and without statistical significance, as the test results obtained from the Chi-Square test show (Table 4).

Table 4. *Relationship between the degree of satisfaction and the disapproval in some Curricular Unit of the Course*

| Items   | Have you ever failed any Curricular Unit of the Course? |        |
|---|---|--------|
| The course I am in satisfies me totally                       | Chi-square  | 6,666  |
|   | df  | 6      |
|   | Sig.  | 0,353  |
| The higher education institution I am in satisfies me totally | Chi-square  | 11,006 |
|   | df  | 6      |
|   | Sig.  | 0,088  |



|   |            |        |
|---|------------|--------|
| The academic success that I have reached satisfies me totally | Chi-square | 17,940 |
|   | df         | 6      |
|   | Sig.       | 0,006  |

As expected, the association between the degree of students' satisfaction with their academic success and failure variable is statistically significant, however, that failure does not seem to interfere with the satisfaction expressed regarding the course and institution.

**3 CONCLUSIONS.** The results shown allow us to conclude that for students in the analyzed sample, from the Nursing and Management courses, in the three institutions of higher education studied, the representation that they showed regarding quality of teaching is positive and they value, in its evaluation, factors regarding the link between training and future profession, the scientific and pedagogical training of teachers and the quality and compliance programs of units of the course curriculum.

The inquired students are satisfied with the course and the institution of higher education and less with their academic performance, which explains the failures that 28.5% indicate to have obtained at least in one curricular unit, although they are attending the 1st grade of the 1st cycle of studies.

As indicators of success, there can be emphasized, in consequence, structural factors such as good organization and structure of courses, the appropriateness of the professional profile of them, teaching competence and the adequacy of the disciplines.

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